

09/341348

PCT COOPERATION TREATY

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09/889926

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference GM/AY/R33-61	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/SG 99/00011	International filing date (day/month/year) 11/02/1999	(Earliest) Priority Date (day/month/year)
Applicant INSTITUTE OF MOLECULAR AGROBIOLOGY et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☒ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☒ furnished subsequently to this Authority in computer readable form.

☒ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☒ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☐ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No. _____

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PC 99/00011

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C12N15/29 C12N15/82 C07K14/415 A01H5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SHINN P. ET AL.: "Genomic sequence for Arabidopsis thaliana BAC F14J16; AC AC002304" EMBL DATABASE, 24 June 1997 (1997-06-24), XP002116650 Heidelberg the whole document	1-4
A	XIA G. ET AL.: "Identification of plant cytoskeletal, cell cycle-related and polarity-related proteins using Schizosaccharomyces pombe" PLANT JOURNAL, vol. 10, no. 4, 1996, pages 761-769, XP000619375 cited in the application the whole document	1-19



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"&" document member of the same patent family

Date of the actual completion of the international search

28 September 1999

Date of mailing of the international search report

12/10/1999

Name and mailing address of the ISA

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Authorized officer

Kania, T

INTERNATIONAL SEARCH REPORT

International Application No

PC 99/00011

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 98 56811 A (QI XIE ;CONSEJO SUPERIOR INVESTIGACION (ES); GUTIERREZ ARMENTA CRI) 17 December 1998 (1998-12-17) the whole document ---	1-19
A	AIDA M ET AL: "Genes involved in organ separation in Arabidopsis: an analysis of the cup-shaped cotyledon mutant." PLANT CELL, (1997 JUN) 9 (6) 841-57. , XP002116652 cited in the application the whole document ---	1-19
A	SOUER E ET AL: "The no apical meristem gene of Petunia is required for pattern formation in embryos and flowers and is expressed at meristem and primordia boundaries." CELL, (1996 APR 19) 85 (2) 159-70. , XP002116653 cited in the application the whole document -----	1-19

Information on patent family members

PC 99/00011

Patent document
cited in search report

Publication
date

Patent family member(s)

Publication
date

WO 9856811

A

17-12-1998

ES

2132025 A

01-08-1999

AU

8216098 A

30-12-1998

PATENT COOPERATION TREATY

PCT

From the INTERNATIONAL BUREAU

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

To:

Assistant Commissioner for Patents
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in its capacity as elected Office

Date of mailing (day/month/year) 28 September 2000 (28.09.00)	
International application No. PCT/SG99/00011	Applicant's or agent's file reference GM/AY/R33-61
International filing date (day/month/year) 11 February 1999 (11.02.99)	Priority date (day/month/year)
Applicant XIE, Qi et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 05 September 2000 (05.09.00)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Pascal Piriou Telephone No.: (41-22) 338.83.38
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INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁷ : C12N 15/29, 15/82, C07K 14/415, A01H 5/00	A1	(11) International Publication Number: WO 00/47742 (43) International Publication Date: 17 August 2000 (17.08.00)
(21) International Application Number: PCT/SG99/00011 (22) International Filing Date: 11 February 1999 (11.02.99) (71) Applicant (for all designated States except US): INSTITUTE OF MOLECULAR AGROBIOLOGY [SG/SG]; 1 Research Link, Singapore 117604 (SG). (72) Inventors; and (75) Inventors/Applicants (for US only): XIE, Qi [CN/SG]; 348K Pasir Panjang Road, Singapore 118824 (SG). CHUA, Nam-Hai [SG/US]; 32 Walworth Avenue, Scarsdale, NY 10583 (US). (74) Agent: ELLA CHEONG & G. MIRANDAH; P.O. Box 0931, Raffles City, Singapore 911732 (SG).		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i>
(54) Title: <i>nacl</i> - A PLANT GENE ENCODING A TRANSCRIPTION FACTOR INVOLVED IN COTYLEDON AND LATERAL ROOT DEVELOPMENT (57) Abstract A novel gene, <i>nacl</i> , has been isolated from Arabidopsis. This gene encodes a protein (NAC1) which has been identified as a member of the NAC family. NAC1 shares a high amino acid sequence homology with other members of the NAC gene products in the N-terminus. Data show that NAC1 belongs to a newly identified family of transcription factors. NAC1 is involved in the regulation of cotyledon and lateral root development. Overexpression of the gene can lead to larger plants with larger roots and more lateral roots than in wild-type plants.		

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